177
372 steel, but we used the 2 pieces of stone and no
462 steel" (SM). Quartz for these strike-a-lights
[439] obtained from Koso Indians at Koso (FP).

Firewood.- Small trunks of willow (ha·l),
313 Salix laevigata Bebb., branches of Fresno tree
(a·wilibi·l), Fraxinus oregana Nutt., stream
alder (pawiču·l), Alnus rhombifolia Nutt., and
dry oak used chiefly for firewood (kutuga't);
cottonwood (u·'ut, generic name for tree), "too
light" (SM). Firewood broken into 3 to 3 1/2-ft.
lengths for carrying in pack basket; women
[462 packed on back loads of slightly longer lengths,
482] but "not too heavy" (FP); men brought in larger
pieces on shoulder.

GLUE, PITCH, AND ASPHALT

● 381 Glue.- Deer horns boiled in small amount of
water, in pot, to obtain glue (a·wadin pa·hn,
horn water); used to apply sinew backing to bows.

314 Pitch.- Several varieties pitch (ša·num) used
824 for different purposes; pitch from Digger pine
415 applied to soles of moccasins to make them wear
longer (FP); pitch from bull pine smeared over
torches used in quail hunting. Basketry water
bottles made watertight by putting handful of
red earth of same variety used for face paint,
plus lump of piñon-pine pitch inside finished
bottle, together with quantity of heated pebbles
about size of person's thumb. Hot pebbles shaken
vigorously inside basket for 5-10 minutes, thus
causing pitch to melt, combine with red earth,
and coat inside of container. Hot melted pitch
also smeared over outside of bottle with small
stick; when it had cooled slightly red earth,
mixed with little water, was smeared on top and
mixed in with pitch coating. The red earth, used
in combination with the pitch, made water "taste
sweet"; if pitch alone used, water had "bitter"
taste.

Pitch or gum (ya·bul), obtained from grease-
wood, used to fill walnut-shell dice (FP).

317 Asphalt.- Lumps of asphalt brought into area
[439 by "the Indians from around Ventura, when the
574] latter came up for piñons. The Tübatulabal also
visited at Ventura, and one of the things they
brought back from the ocean was asphalt" (SM).
This commodity used in variety of ways, some of
which were: to attach prong to shaft of harpoon,
to attach bone point to fish hook, to cement
foreshaft in cane mainshaft of arrow, and socket
arrowheads into foreshaft, to secure knife blade
in handle, to attach basket hopper to mortar.
Asphalt also used to smear over fishlines made
of native twine, and lumps of it served as knob
handles for bone, cactus spine awls. Asphalt was
softened by melting; often applied with small
stick." Gifford and Schenck (p. 53) also note
presence of asphalt beds on surface in hills SW